

process chamber so as to adjust the rate of change in the thickness of the thin film to a regulated value;

wherein said regulated value is the rate of change in the thickness of said thin film obtained before changing the circulating ratio.

29. (Amended) The plasma processing method according to claim 26, wherein said process gas introduced into the process chamber contains a gaseous component having C and F; a silicon oxide film that is processed by an etching is formed on the surface of said substrate; and said property value represents the intensity of the light emission from CF<sub>2</sub> radicals.

#### REMARKS

Applicants submit this Preliminary Amendment which amends claims 18, 23, 26, and 29, to more appropriately define the invention. Attached hereto is a marked-up version of the changes made to the claims by this Amendment. The attachment is captioned "**Appendix to Preliminary Amendment of March 26, 2003.**"

Claims 1-31 are pending in this application, with claims 18-31 withdrawn from consideration as directed to a non-elected invention by a Response to Restriction Requirement filed concurrently herewith. Amended claims 18, 23, 26, and 29 belong to the non-elected invention.

Applicants respectfully request favorable consideration of this application and timely allowance of pending claims.

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If there is any fee due in connection with the filing of this Preliminary  
Amendment, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

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**APPENDIX TO PRELIMINARY AMENDMENT OF MARCH 26, 2003**  
**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**AMENDMENTS TO THE CLAIMS**

Please amend claims 18, 23, 26, and 29 as follows:

18. (Amended) A plasma processing method, in which a process gas is introduced into an evacuated process chamber for forming a thin film on the surface of a [target object] substrate, comprising:

introducing again at least a part of the process gas exhausted from said process chamber into said process chamber while processing [a] said thin film [formed of the same material] attached to said surface within said process chamber;

monitoring the rate of change in the thickness of [the] said thin film [formed on the] attached to said surface [of said target substrate] within said process chamber; and

controlling the introducing conditions of the process gas into the process chamber in changing the circulating ratio of the process gas into the process chamber so as to allow the rate of change in the thickness of said thin film to form a regulated value;

wherein said regulated value is a rate of change in the thickness of the thin film obtained before changing the circulating ratio.

23. (Amended) The plasma processing method according to claim 19, wherein said process gas introduced into the process chamber contains a gaseous component

having C and F; a silicon oxide film that is processed by an etching is [formed on the]  
attached to said surface [of said target substrate] within said process chamber; and said  
property value represents the intensity of the light emission from CF<sub>2</sub> radicals.

26. (Amended) A plasma processing method, in which a process gas is introduced into an evacuated process chamber so as to process a thin film on the surface of a [target] substrate, comprising:

introducing again at least a part of the process gas exhausted from said process chamber into said process chamber;

monitoring the rate of change in the thickness of a thin film formed on the surface of said [target] substrate within said process chamber; and

controlling the introducing conditions of the process gas into the process chamber in changing the circulating ratio of the process gas introduced again into the process chamber so as to adjust the rate of change in the thickness of the thin film to a regulated value;

wherein said regulated value is the rate of change in the thickness of said thin film obtained before changing the circulating ratio.

29. (Amended) The plasma processing method according to claim 26, wherein said process gas introduced into the process chamber contains a gaseous component having C and F; a silicon oxide film that is processed by an etching is formed on the surface of said [target] substrate; and said property value represents the intensity of the light emission from CF<sub>2</sub> radicals.

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